IN THE CLAIMS:

1. **(Currently Amended)** Method for dynamic determination of time constants to be used in a detection of the signal level of an input signal of unknown level in an electric circuit, comprising the following steps:

~~feed~~ feeding the input signal through an auxiliary level detection means that ~~is reacting~~ reacts faster to changes in ~~the~~ input sound signal level than ~~the~~ detection of ~~the~~ signal level as a whole,

~~feed~~ feeding either the input signal or ~~the~~ output of the auxiliary level detection means through a guided level detection means[[,]] which is arranged with a guided time constant, and where the guided level detection means outputs an estimate of the level of the input signal,

~~analyze~~ analyzing the outputs of the auxiliary and the guided level detector means by converting an amplitude estimate of both level detectors to a level estimate on a dB scale, determining a difference between the level of the auxiliary level detector and the level of the guided level detector, and determining the time constant of the guide level detector as a function of the level difference, and

~~determine~~ determining the time constant of the guided level detection means based on this analysis.

2. **(Original)** Method as claimed in claim 1, where the time constant of the auxiliary level detector is set to a fixed value that is substantially smaller than the time constant of the level detector as a whole.

3. **(Cancel)**

4. **(Currently Amended)** Method as claimed in claim ~~3~~ 1, where the function that determines the time constant of the guided level detector outputs a time constant that is maximal at a zero differences between the outputs of the auxiliary level detector and the guided level detector, and that is decreasing or constant for an increasing absolute value of the level difference.

5. **(Previously Presented)** Method for level detection, wherein a time constant as determined in claim 1 is generated and used in the level detection.

6. **(Original)** Method for level detection as claimed in claim 5, wherein a traditional slow level estimator is used in parallel with the fast level detector to track the long term average level, whereby an offset value is subtracted this long term average level to define a noise offset level, and where the maximum of the noise offset level and the value from the fast level detector is output as the signal level.

7. **(Previously Presented)** Method for compressing an electric audio signal, which uses a method for level detection as defined in claim 5.

8. **(Canceled)**.

9. **(New)** A method of determining levels of a speech in a hearing device in accordance with claim 7.

10. **(New)** A method as claimed in claim 9 wherein the speech comprises successive phonemes, where the phoneme containing electrical signal is fed to the relatively fast auxiliary detection means providing a fast level estimate and to the relatively slower guided detection means providing a slow level estimate, where an offset value, typically 15 dB, is subtracted from the slow level estimate, and where the level of speech is determined by the maximum value of the fast and slow level estimates.

11. **(New)** A method as claimed in claim 1, wherein said steps are conducted using a digital signal processor.